

10/593052

API2 Rec'd 09/15 SEP 2006

## **A MYOPIA THERAPY APPLIANCE AND A BLINDER WITH SAID APPLIANCE**

### **Field of the Invention**

The invention relates to a myopia prophylactic and therapy appliance. More specifically, it is an improvement of myopia therapy appliances currently available.

### **Background of the Invention**

Many measures, such as electrical impulses, acupuncture, presbyopic glasses and vibration massage, have been tried for myopia prophylaxis and therapy in order to get rid of the inconvenience and suffering caused by myopia. Though these measures help to some extent, they are not very effective. For example, there is a blinder available for myopia therapy by massaging the eyeball with a massage-head. Since the eyelid and the eyeball are separate and lubricated with tears, when the massage-head revolves against the eyelid, the eyelid follows but the eyeball does not, which is unlike the relationship of skin and muscle in which muscle follows the movement of the skin since they are bound together. Therefore, the massage is not effective, that is, the eyelid will hurt and suffer with strong massage and it does not help with light massage.

### **Summary of the Invention**

An object of the invention is to provide a more effective myopia therapy appliance and a blinder therewith, and to solve the problems that the massage is not effective, and the eyelid will hurt and suffer with strong massage and it does not help with light massage.

In order to achieve the above purpose, the inventive myopia therapy appliance includes a suction head and a handle. The end of the suction head comprises a round, flat, smooth opening. A blowhole is set on the wall of the handle.

In one embodiment of the invention, the end of the suction head is an intrados to fit the eyeballs snugly or tightly, that is to match the shape of the eyes.

In another embodiment, the suction head is more than 8mm deep to avoid contact with eyelashes.

In yet another embodiment, the diameter of the suction head is between 10mm and 35mm.

According to another aspect of the invention, the myopia therapy appliance described above is installed on a blinder, which includes a concave opaque cover with an elastic strap. The handle of the appliance is detachably installed on the cover to avoid possible detachment of the suction head from the handle when the appliance is pushed back and forth.

Many advantages and positive effects have been achieved in the invention. During the course of using the appliance, first, put the suction head snugly on the eyeball. A snug fit is required in order to vent the air out of the suction head and thereby partly expel the air inside. Covering, or nipping, the blowhole in the handle produces minus, or negative, air pressure. Thus, negative pressure is produced in the suction head by nipping the blowhole. Lastly, (because of the negative pressure between the eyelid and eyeball,) the suction head sucks the eyelid and the eyeball, and moves back and forth by pulling forward and pushing backward the handle. As the eyeball is controlled by six extraocular muscles, when the handle is pulled forward, a slight fore-and-aft distortion happens to the eyeball because of the movement of the extraocular muscles; when the handle is pushed backward, a right-and-left distortion happens to the eyeball because of the barrier of orbit bones. Therefore strong massage can be achieved to the spasmodic ciliary muscle in the

eyeball by the two directional distortions of the eyeballs so that the ciliary muscle can soon be relaxed and return to regulate normally and to restore eye adjustability. Since the extraocular muscles are also massaged when the eyeball moves back and forth, dragging the six extraocular muscles to move back and forth, fatigue can be gotten rid of in the entire eye. Therefore, the invention is effective, easy to use and manufacture, and inexpensive. In addition, the invention also helps in treatment for strabismus and hyperopia.

### **Brief Description of the Figures**

Fig. 1 is a sectional view of an appliance according to one embodiment of the invention;

Fig. 2 is a side view of the appliance in Fig.1;

Fig. 3 is a perspective view of the appliance in Fig.1 installed on a blinder.

The following is a list of the reference numerals of the parts of the invention shown in the Figures:

- 1 suction head;
- 2 handle;
- 3 blowhole;
- 4 intrados;
- 5 blinder;
- 6 elastic strap;
- 7 myopia therapy appliance.

### **Detailed Description of the Preferred Embodiment**

Referring to Figs. 1-2, the inventive myopia therapy appliance includes a suction head (or tip) 1 and a handle 2. The end of the suction head is in the form of a round flat opening. In other words, the tip end is a smooth round opening. A blowhole 3 is set on the wall of the handle 2. The end of the suction head 1 is an intrados 4 to fit the eyeballs snugly, or tightly. In other words, the intrados 4 is at the tip end, so it can be held closely

to the eyes. The suction head 1 is more than 8mm deep to avoid contact with eyelashes during use. The diameter of the suction head 1 is between 10mm and 35mm. The diameter of the handle 2 may be less than, or equal to, that of the suction head 1. In addition, the myopia therapy appliance 7 is made of opaque material in order to facilitate relaxation of the eye in the dark during treatment.

Referring to Fig. 3, in another embodiment of the invention, a myopia therapy appliance is installed on a blinder, and the blinder includes a concave opaque cover 5 with an elastic strap 6. The myopia therapy appliance 7 is detachably installed on the cover 5. The myopia therapy appliance 7 includes a suction head 1 and a handle 2. The end of the suction head is in the form of a round flat open. A blowhole 3 is set on the wall of the handle 2. The end of the suction head 1 is an intrados 4 to fit the eyeballs snugly, or tightly. The suction head 1 is more than 8mm deep to avoid contact with eyelashes during use. The diameter of the suction head 1 is between 10mm and 35mm. The diameter of the handle 2 may be less than, or equal to, that of the suction head 1. In addition, both the myopia therapy appliance 7 and the cover 5 can be made of opaque material in order to let the eyes have a relaxed treatment.

The above description is not to be considered as limiting the scope to the precise embodiments described herein, nor the embodiments as limiting the scope of the invention. Equivalents will be known and understood to persons skilled in the art. Many modifications, alterations, additions, and substitutions can be made by those skilled in the art, without departing from the scope of the invention as defined in the appended claims.